HOW TO UNDERSTAND A BALANCE SHEET

Peirce, Cyrus & company

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CYRUS PEIRCE & COMPANY

We make grateful acknowledgment
to the
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Hatfield bookplate

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It will be apparent to the reader that the method of analysis explained in this booklet applies only to industrial companies.

Fourth Edition

THE ability to read a balance sheet and from it understand the exact financial condition of any company, is an important aid to an investor. ¶When an Investment Banking House is offered the bonds, notes or securities of a corporation, the first and most important step is to examine its balance sheet.

The Investment Banking House employs the most capable public accountants available to prepare and certify the corporation's balance sheet, because an accurate balance sheet is an exact register of the organization's financial health.

We have found, in explaining the merits of securities, that many investors have not had special training which enables them to form an independent judgment of a company's financial condition by an inspection of the balance sheet.

Believing that a simple explanation of how to read a balance sheet will be of value to many of our clients, we are reproducing herewith four actual balance sheets of well known companies which will serve as examples for the discussion.

It will be observed that the amounts listed under the column entitled "Desirable Limits" are not the same in the four examples nor are the comments attached. In the first place, it must be kept in mind that the limits fixed for the four examples depend to some extent upon the dates of the balance sheet, for relations among the various factors have seasonal variations. Again, among any groups of factors, a relation which might be desirable for one class of industry would be highly unsuitable for another. No hard and fast rule may be laid down, and in individual instances experience must be the guide, but it is believed that even under such conditions, the method here presented will give any one a better understanding of the average balance sheet.

ANALYSIS KEY			
1	Ratio of Current Assets	to Current Liabilities	= Degree of liquidity.
2	Ratio of Reserves	to Total Assets	= Degree of conservatism.
3	Ratio of Cash	to Current Liabilities	= Cash position.
4	Ratio of Fixed Assets	to Net Worth	= Apportionment of Stockholders' interest.
5	Ratio of Receivables	to Sales	= Collection policy.
6	Ratio of Merchandise	to Sales	= Size of inventory.
7	Ratio of Sales	to Net Worth	= Activity of Stockholders' investment.
8	Ratio of Debt	to Net Worth	= Relation between money-interest of Creditors and that of Stockholders.
9	Ratio of Sales	to Fixed Assets	= Vitality of Fixed Assets.
10	Ratio of Profits or Deficit to Capitalization		= Degree of profitableness of business.

EXAMPLE NUMBER ONE

LARGE AUTO ACCESSORY CO' BALANCE SHEET

OCTOBER 31, 1920

	ANALYSIS		Actual Condition	Desirable Limits	COMMENT
1	Current Assets = Current Liabilities =	$65,895,193 49,806,494 } =	132%	200%	This signifies that there is but $1.32 of Current Assets for every $1.00 of Current Liabilities. There should be at least $2.00 of Current Assets for every $1.00 of Current Liabilities.
2	Reserves = Total Assets =	1,716,575 169,012,832 } =	1%	3%	This indicates that there is only 1c. of Reserves for every $1.00 of Total Assets. Conservatism would demand at least 3c. of Reserves for every $1.00 of Total Assets.
3	Cash = Current Liabilities =	2,178,509 49,806,494 } =	4%	25%	This denotes there is 4c. of Cash on hand for every $1.00 of Current Liabilities. This is a very weak cash position. There should be at least 25c. of Cash on hand for every $1.00 of Current Liabilities.
4	Fixed Assets = Net Worth =	103,117,639 111,597,519 } =	92%	50%	This shows that there is 92c. of Fixed Assets for every $1.00 of Net Worth.
5	Receivables = Sales =	12,519,035 188,866,024 } =	6%	10%	This registers that the Receivables on hand amount to 6c. per $1.00 of Sales, and also that the Receivables equal 22 days' business. Both of these elements indicate a good state of collectivity. There should never be more than 10c. of Receivables for every $1.00 of Sales.
6	Merchandise = Sales =	51,197,649 188,866,024 } =	27%	30%	This indicates 27c. of Merchandise on hand for every $1.00 of Sales; Merchandise equals about 90 days of business, and a merchandise turnover of about 4 times per annum. This is normal showing. Merchandise should not run over 30c. per $1.00 of Sales.
7	Sales = Net Worth =	188,866,024 111,597,519 } =	169%	200%	This reflects there was $1.69 of Sales for every $1.00 of Net Worth. This is very sluggish. There should be at least $2.00 of Sales per $1.00 of Net Worth (Stockholders' interest).
8	Debt = Net Worth =	55,698,000 111,597,519 } =	49%	30%	This points to there being 49c. of Debt for every $1.00 of Net Worth (Stockholders' investment). There should not be more than 30c. of debt for every $1.00 of Net Worth.
9	Sales = Fixed Assets =	188,866,024 103,117,639 } =	182%	300%	Signifies there was $1.82 of Sales for every $1.00 Fixed Assets. This is much too small; there should be at least $3 of Sales for every $1 Fixed Assets. Volume of Sales does not make Plant investment worth while.
10	Deficit = Capitalization =	2,046,731 132,050,000 } =	1½%	15%	The operations of Company were conducted at a loss equal to 1½c. on every $1.00 of Capitalization. Normal profits should have been at least 15c. on each $1.00 of Capitalization.

SUMMARY

The above analysis discloses the following danger points:

[1] A poor business balance.
[2] Lack of conservative reserves.
[3] Poor cash position.
[4] Too heavy investment in plant.
[7] Subnormal activity of invested funds.
[8] Bad balance between capital invested and capital secured by loans.

[9] This, together with No. 4, shows that plant has been enlarged more rapidly than net worth (stockholders' interest), and also that sales activity is not keeping pace with the increase in size of plant.

[10] Business operated at a loss instead of a profit.

The following are normal points:

[5] Efficient collection policy.
[6] Turnover of merchandise is active enough and is proportionate.

The above analysis shows a precarious financial condition; there is need for immediate intelligent correction if this company is to be saved from reorganization or worse.

EXAMPLE NUMBER TWO

LARGE AND WELL-KNOWN REFRIGERATOR CO.

BALANCE SHEET AUG. 31, 1920

	ANALYSIS	Actual Condition	Desirable Limits	COMMENT
1	Current Assets = $1,077,187 Current Liabilities = 606,430 =	178%	300%	Indicates there is $1.78 of Current Assets for every $1.00 of Current Liabilities. There should be at least $3.00 of Current Assets for every $1.00 of Current Liabilities.
2	Reserves = ... Total Assets = 2,395,036 =	. . .		This shows a glaring unprotected Reserve condition, and is a strong indication of inferior financial ability. There should be at least 5c. of Reserves for every $1.00 of Total Assets.
3	Cash = 45,737 Current Liabilities = 606,430 =	7%	25%	Evidences there is 7c. of Cash for every $1.00 of Current Liabilities. This is poor showing of Cash status. There should be at least 25c. of Cash for every $1.00 of Current Liabilities.
4	Fixed Assets = 1,317,849 Net Worth = 1,170,436 =	113%	60%	Signifies there is $1.13 of Fixed Assets per $1 00 of Net Worth.
5	Receivables = 244,260 Sales = 1,488,538 =	16%	20%	Reflects there is 16c. of Receivables on hand for every $1.00 of Sales; same equals about 60 days of business. This is a normal collection showing. There should not be more than 20c. of Receivables per $1.00 of Sales.
6	Merchandise = 787,190 Sales = 1,488,538 =	52%	40%	This shows that there is 52c. of Merchandise for every $1.00 of Sales; same equals 189 days of business, and a merchandise turnover of about 2 times per annum. This is too large an inventory status. There should not be more than 40c. of Merchandise for every $1.00 of sales.
7	Sales = 1,488,538 Net Worth = 1,170,436 =	127%	300%	Denotes there was $1.27 of Sales for every $1.00 of Net Worth (Stockholders' interest). This is a striking case of "dry rot," and a very overextended condition. There should be at least $3.00 of Sales for every $1.00 of Net Worth.
8	Debt = 1,224,600 Net Worth = 1,170,436 =	104%	30%	Registers there is $1.04 of Debt for every $1.00 of Net Worth (Stockholders' investment). This means that the Creditors have a greater interest by 4c. than the legal owners. There should not be over 30c. of Debt to every $1.00 of Net Worth.
9	Sales = 1,488,538 Fixed Assets = 1,317,849 =	113%	400%	Indicates there was $1.13 of Sales for every $1.00 of Fixed Assets. This is much too small. There should be at least $4.00 of Sales for every $1.00 of Fixed Assets. Viewed with No. 4, it shows that sales productivity does not warrant size of plant.
10	Profit = 135,509 Capitalization = 1,788,000 =	8%	15%	Shows that only 8c. per $1.00 of Capitalization was earned for the year. This should have amounted to at least 15c. per $1.00 of Capitalization.

SUMMARY

Above analysis shows these danger points:

[1] Poor liquidity status.

[2] Absence of reserves.

[3] Weak cash position.

[4] A too heavy investment in fixed assets compared with amount of stockholders' investment.

[6] Merchandise on hand is abnormal, and turnover of same is too small.

[7] Vitality of money investment is sluggish.

[8] Funds controlled by creditors are greater than money investment of stockholders.

[9] Sales activity does not warrant plant investment, and, considered with No. 4, points to an overextended status.

[10] Profits are much below a profitable return.

The following is the normal point:

[5] Good collection policy.

This business is not far from so-called "financial rocks." It has all the "ear-marks" of incompetent, old-fashioned management. Here is an example of a company that would be practically impossible to rejuvenate.

EXAMPLE NUMBER THREE

OLD AND WELL-ESTABLISHED MAIL ORDER HOUSE

BALANCE SHEET DEC. 31, 1920

	ANALYSIS	Actual Condition	Desirable Limits	COMMENT
1	Current Assets =$163,531,811 Current Liabilities= 73,180,074 =	223%	250%	Signifies there is $2.23 of Current Assets for every $1.00 of Current Liabilities. There should be at least $2.50 of Current Assets for every $1.00 of Current Liabilities in view of quality of Current Assets and character of clientele.
2	Reserves = 3,423,749 Total Assets =230,668,197 =	1%	3%	Indicates there is 1c. of Reserves for each $1.00 of Total Assets. There should be at least 3c. of Reserves for each $1.00 of Total Assets for a sound showing.
3	Cash = 3,263,353 Current Liabilities = 73,180,074 =	4%	25%	Points to Cash of 4c. for every $1.00 of Current Liabilities. This is very weak Cash condition. There should be at least 25c. of Cash for every $1.00 of Current Liabilities.
4	Fixed Assets = 67,136,385 Net Worth = 90,554,374 =	74%	60%	Registers that there is 74c. of Fixed Assets for every $1.00 of Net Worth.
5	Receivables = 47,797,134 Sales =233,856,872 =	20%	30%	This means that there are 20c. of Receivables on hand for every $1.00 of Sales, Receivables amounting to 72 days' business. There should not be more than 30c. of Receivables for every $1.00 of Sales in this class of business.
6	Merchandise =105,071,243 Sales =233,856,872 =	45%	25%	This points to there being 45c. of Merchandise on hand for every $1.00 of Sales; it equals 162 days of business, and an annual turnover of a little more than two times. This is too heavy an Inventory. There should not be more than 25c. of Merchandise for every $1.00 of Sales, which would equal 90 days' business, and a turnover per year of about four times.
7	Sales =233,856,872 Net Worth = 90,554,374 =	258%	300%	Reflects there was $2.58 of Sales for every $1.00 of Net Worth (Stockholders' interest). To show a healthy status in this regard there should be at least $3.00 of Sales to every $1.00 of Net Worth.
8	Debt =110,103,823 Net Worth = 90,554,374 =	122%	60%	This points to a debt of $1.22 for every $1.00 of Net Worth (Stockholders' investment). This is a strong point of inferior financial management, showing that the creditors have a greater interest in the business by 22c. than the legal owners. There should not be over 60c. of Debt for every $1.00 of Net Worth.
9	Sales =233,856,872 Fixed Assets = 67,136,385 =	348%	400%	This indicates that volume of Sales amounted to $3.48 per $1.00 of Fixed Assets. It means that amount of capital invested in Fixed Assets is not warranted by volume of Sales. Sales should at least equal $4.00 for every $1.00 of Fixed Assets.
10	Profit = 11,746,670 Capitalization =154,064,373 =	7%	15%	Operations of company were conducted at a profit of but 7c. for every $1.00 of Capitalization. Normal showing would call for a yield of at least 15c. of Profit for every $1.00 of Capitalization.

SUMMARY

Above analysis shows these danger points:

[1] Poor liquidity balance.

[2] Unprotected reserve position.

[3] Dangerous cash showing.

[4] Too great investment in fixed assets for total stockholders' investment.

[6] Too heavy inventory showing.

[7] Vitality of unit of money investment is too small.

[8] Striking example of a poor balance between money supplied business by stockholders and that by creditors.

[9] Sales do not warrant plant investment, and, considered with No. 4, show that the organization is overextended.

[10] Profits are one-half the minimum return that would reflect a healthy return.

The following is the normal point:

[5] A good collectivity showing.

The above analysis shows that the management will have a number of difficult problems on its hands in bringing this business back into proper balance.

BELOW is reproduced the balance sheet of a well-known tractor company. Because it reflects a strong position in view of recent trade conditions, it will be used as Example Number Four. On the opposite page we have analyzed this Balance Sheet, believing that the method will be apparent and will aid the reader in making an independent analysis of other balance sheets.

ACTUAL BALANCE SHEET OF
WELL-KNOWN TRACTOR COMPANY
AS OF MARCH 31, 1921

ASSETS

Cash in Banks and On Hand		$ 209,281.40	
Inventory		1,648,624.90	
Notes and Accounts Receivable		237,398.16	$2,095,304.46
Patents			1.00
Land Buildings and Equipment		$ 901,761.43	
Less: Reserve for Depreciation		189,587.00	$ 712,174.43
Claim for Refund of Overpayment to U. S. Government 1917 Federal Income Taxes			28,200.01
Deferred Charges			25,001.48
Total Assets			$2,860,681.38

LIABILITIES

Notes Payable		$ 225,900.00	
Accounts Payable		105,412.92	$ 331,312.92
Debenture Serial Notes			450,000.00
Reserve for Workmen's Compensation			20,000.00
Capital Stock:			
Preferred 7% Cumulative	$1,250,000.00		
Common	500,000.00	$1,750,000.00	
Surplus, Subject to Provision for Federal Income and Profit Taxes		309,368.46	$2,059,368.46
Total Liabilities			$2,860,681.38

EXAMPLE NUMBER FOUR

BALANCE SHEET OF WELL-KNOWN TRACTOR COMPANY

MARCH 31, 1921

	ANALYSIS	Actual Condition	Desirable Limits	COMMENT
1	Current Assets = $2,095,304.46 / Current Liabilities = 331,312.92 =	630%	200%	This shows $6.30 of Current Assets for every $1.00 of Current Liabilities as against a normal requirement of $2.00, a very satisfactory position.
2	Reserves = 189,587.00 / Total Assets = 3,050,268.38 =	6.22%	3%	Indicates there is 6.22 Cents of Reserves for each $1.00 of Total Assets, which is ultra conservative and over twice the amount necessary in the normal course of events.
3	Cash = 209,281.40 / Current Liabilities = 331,312.92 =	63%	25%	Points to Cash of 63c. for each $1.00 of Current Liabilities. This reflects a very strong Cash position, as 25c. for each $1.00 of Current Liabilities is ordinarily a safe margin.
4	Fixed Assets = 901,761.43 / Net Worth = 2,059,368.46 =	43.8%	50%	Signifies that there is 43.8c. of Fixed Assets for every $1.00 of Net Worth.
5	Receivables = 237,398.16 / Sales* = 2,835,646.82 =	8 1/3%	10%	This means that there is 8 1/3c. of Receivables on hand for every $1.00 of Sales. Receivables amount to about 30 days' business. A 10% limit is satisfactory in this class of business.
6	Merchandise = 1,648,624.90 / Sales* = 2,835,646.82 =	58%	40%	This reflects too heavy an inventory. In this business an inventory of 40% of Sales is considered normal.
7	Sales* = 2,835,646.82 / Net Worth = 2,059,368.46 =	137.7%	200%	This shows there was $1.37 7/10 of Sales for every $1.00 of Net Worth (Stockholders' interest). Normally this figure should be $2.00 or more to each $1.00 of Net Worth.
8	Debt = 801,312.92 / Net Worth = 2,059,368.46 =	39%	50%	Registers there is 39c. of Debt for every $1.00 of Net Worth (Stockholders' Investment) which is about the normal ratio for a company of this kind.
9	Sales* = 2,835,646.82 / Fixed Assets = 901,761.43 =	314%	400%	This indicates that volume of Sales amounted to $3.14 per $1.00 of Fixed Assets. This means that this Company's plant was not turning out tractors up to its normal capacity.
10	Profit* = 111,916.99 / Capitalization = 1,750,000.00 =	6.4%	15%	Shows that operations of Company produced 6.4 Cents per $1.00 of Capitalization. Normal showing would call for a yield of at least 15c. of profit for every $1.00 of Capitalization.

*These figures are not obtained from the balance sheet but are taken from the Company's earning statement.

SUMMARY

Above analysis shows:

[1] Extraordinary Current position.

[2] Adequate reserves.

[3] Strong Cash position.

[4] Normal investment in plant.

[5] Strong Collectivity showing.

[6] Too heavy inventory showing.

[7] Activity of invested funds about one-third under normal.

[8] Shows money properly supplied by Stockholders instead of by Creditors.

[9] Points to Sales activity not up to Plant capacity.

[10] Profits are sub-normal.

Above Analysis shows that this Company's condition is sound, and with increased sales efforts it should show normal profit for the year. This is a remarkable balance sheet in view of present conditions.

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